

ABSTRACT

In the on-vehicle radar apparatus of the present invention, the vertical scanning width of the radar beam is narrowed,
5 before the horizontal scanning, thereby avoiding unnecessary data processing and improving the data processing efficiently. Further, the S/N ratio of the target detection signal is increased, thereby stabilizing the distance detection and its accuracy. The vertical scanning
10 antenna is a single travelling wave excitation antenna (TWEA) constructed by a plurality of antenna elements. At the same time, the horizontal scanning antenna is a multi-channel antenna wherein a plurality of TWEAs is assigned to a plurality of horizontal directions. The
15 horizontal scanning angle is arbitrarily widened by increasing the number of TWEAs.

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